

PATENT COOPERATION TREATY

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INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY

(Chapter II of the Patent Cooperation Treaty)

(PCT Article 36 and Rule 70)

Applicant's or agent's file reference 032828woHibu		FOR FURTHER ACTION		See Form PCT/PEA/416
International application No. PCT/EP2004/002588		International filing date (day/month/year) 12.03.2004		Priority date (day/month/year) 12.03.2004
International Patent Classification (IPC) or national classification and IPC INV. H02J3/18				
Applicant GENERAL ELECTRIC COMPANY				
<p>1. This report is the international preliminary examination report, established by this International Preliminary Examining Authority under Article 35 and transmitted to the applicant according to Article 36.</p> <p>2. This REPORT consists of a total of 5 sheets, including this cover sheet.</p> <p>3. This report is also accompanied by ANNEXES, comprising:</p> <p>a. <input type="checkbox"/> sent to the applicant and to the International Bureau) a total of sheets, as follows:</p> <p><input type="checkbox"/> sheets of the description, claims and/or drawings which have been amended and are the basis of this report and/or sheets containing rectifications authorized by this Authority (see Rule 70.16 and Section 607 of the Administrative Instructions).</p> <p><input type="checkbox"/> sheets which supersede earlier sheets, but which this Authority considers contain an amendment that goes beyond the disclosure in the international application as filed, as indicated in item 4 of Box No. I and the Supplemental Box.</p> <p>b. <input type="checkbox"/> (sent to the International Bureau only) a total of (indicate type and number of electronic carrier(s)) , containing a sequence listing and/or tables related thereto, in electronic form only, as indicated in the Supplemental Box Relating to Sequence Listing (see Section 802 of the Administrative Instructions).</p>				
<p>4. This report contains indications relating to the following items:</p> <p><input checked="" type="checkbox"/> Box No. I Basis of the report</p> <p><input type="checkbox"/> Box No. II Priority</p> <p><input type="checkbox"/> Box No. III Non-establishment of opinion with regard to novelty, inventive step and industrial applicability</p> <p><input type="checkbox"/> Box No. IV Lack of unity of invention</p> <p><input checked="" type="checkbox"/> Box No. V Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement</p> <p><input type="checkbox"/> Box No. VI Certain documents cited</p> <p><input type="checkbox"/> Box No. VII Certain defects in the international application</p> <p><input checked="" type="checkbox"/> Box No. VIII Certain observations on the international application</p>				
Date of submission of the demand 10.01.2006		Date of completion of this report 26.05.2006		
Name and mailing address of the international preliminary examining authority:  European Patent Office D-80298 Munich Tel. +49 89 2399 - 0 Tx: 523656 epmu d Fax: +49 89 2399 - 4465		Authorized officer Calarasanu, P Telephone No. +49 89 2399-2870		



INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY

International application No.
PCT/EP2004/002588

Box No. I Basis of the report

1. With regard to the **language**, this report is based on the international application in the language in which it was filed, unless otherwise indicated under this item.
- ☐ This report is based on translations from the original language into the following language, which is the language of a translation furnished for the purposes of:
- ☐ international search (under Rules 12.3 and 23.1(b))
 - ☐ publication of the international application (under Rule 12.4)
 - ☐ international preliminary examination (under Rules 55.2 and/or 55.3)
2. With regard to the **elements*** of the international application, this report is based on *(replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are not annexed to this report)*:

Description, Pages

1-11 as originally filed

Claims, Numbers

1-24 as originally filed

Drawings, Sheets

1/3-3/3 as originally filed

- ☐ a sequence listing and/or any related table(s) - see Supplemental Box Relating to Sequence Listing
3. ☐ The amendments have resulted in the cancellation of:
- ☐ the description, pages
 - ☐ the claims, Nos.
 - ☐ the drawings, sheets/figs
 - ☐ the sequence listing (*specify*):
 - ☐ any table(s) related to sequence listing (*specify*):
4. ☐ This report has been established as if (some of) the amendments annexed to this report and listed below had not been made, since they have been considered to go beyond the disclosure as filed, as indicated in the Supplemental Box (Rule 70.2(c)).
- ☐ the description, pages
 - ☐ the claims, Nos.
 - ☐ the drawings, sheets/figs
 - ☐ the sequence listing (*specify*):
 - ☐ any table(s) related to sequence listing (*specify*):

* If item 4 applies, some or all of these sheets may be marked "superseded."

**INTERNATIONAL PRELIMINARY REPORT
ON PATENTABILITY**

International application No.
PCT/EP2004/002588

Box No. V Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

1. Statement

Novelty (N)	Yes: Claims	3,5,6,8,9,13,16,17,18,19,24
	No: Claims	1,2,4,7,10,11,12,14,15,20,21,22,23
Inventive step (IS)	Yes: Claims	8,9
	No: Claims	1, 2,3,4, 5,6,7,10,11,12,13,14,15,16,17,18,19,20,21,22,23,24
Industrial applicability (IA)	Yes: Claims	1-24
	No: Claims	

2. Citations and explanations (Rule 70.7):

see separate sheet

Box No. VIII Certain observations on the international application

The following observations on the clarity of the claims, description, and drawings or on the question whether the claims are fully supported by the description, are made:

see separate sheet

Re Item V

**Reasoned statement with regard to novelty, inventive step or industrial applicability;
citations and explanations supporting such statement**

Reference is made to the following documents:

D1: US 5798631

D2: US 5225712

D3: WO 02/103879

1. The present application does not meet the criteria of Article 33(1) PCT, because the subject-matter of claims 1,10,14,21 is not new in the sense of Article 33(2) PCT. Concerning claim 1, document D1 discloses (column 2, line 65 - column 19, line 59; figures 1-18) a method for operating a frequency converter (26,32,38) of a generator (20) connected to a wind energy turbine and to a grid through said frequency converter comprising an AC/DC/AC converter.

The frequency converter operates for maximizing the output power when the grid voltage has normal values, but also for generating reactive power when voltage dips, implying substantial grid voltage drops, occur (see column 16, lines 25 - 32).

Thus, the subject-matter of claim 1 is not novel over document D1.

The same objection is valid for the independent apparatus claim 14.

Concerning claim 10, document D2 (column 8, line 40 - column 30, line 59; figures 1-25) describes a method applied to the same frequency converter as in claim 1, but operating under normal grid condition and with the generator not being in its operating state.

The frequency converter furnishes reactive current to the grid by controlling the dc/AC grid-side power converter.

Thus the subject-matter of claim 10 is not novel over D2.

The same objection is valid for the independent apparatus claim 21.

2. Dependent claims 2 to 7, 11 to 13, 15 to 20, 22 to 24 do not contain any features which, in combination with the features of any claim to which they refer, meet the requirements of the PCT in respect of novelty and/or inventive step, for the following reasons:

- the subject-matter of claims 2,4,7,15,20 is known from D1;
- the subject-matter of claims 3,5,6,11,12,16,17,18,19,22,23 is known from D2;
- the subject-matter of claims 13,24 is known from D3.

3. The combination of the features of dependent claim 8 and 9 is neither known from, nor rendered obvious by, the available prior art.

Re Item VIII

Certain observations on the international application

1. Although claims 1 and 10, as method claims, and claims 14 and 21, as apparatus claims, have been drafted as separate independent claims, they appear to relate effectively to the same subject-matter and to differ from each other only with regard to the definition of the subject-matter for which protection is sought and/or in respect of the terminology used for the features of that subject-matter. The aforementioned claims therefore lack conciseness and as such do not meet the requirements of Article 6 PCT.